



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

D2662-2

Job Sheet 187090



Part No: D2662-2

Job Qty: 4 pcs

Part Name: Saddle, LH Fwd, Aft, Out



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 11/27/18

Job Tracking No:

Due Date: 12/19/18

Created By: Jesse White

Type: SOLD

Description:

Note: DWG REV E IPP: C 00.11.01 Removed P/O for Powder Coat - in house process EC IPP REV:D REDESIGN
PER ENG ERROR 11-11-17 JLM VERIFIED BY:DD IPP Rev:D As per Rev D 07-03-19 JLM

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup Hrs	Run Hrs	Workcenter / Supplier	Lead Time	
100	HAAS 4 Axis	4 pcs	12/19/18		0.00	4.96	HAAS - 1		SBL 18/12/05
							HAAS - 2		
							HAAS - 3		
							HAAS - 4		
110	Conventional Mill - 1 - B4B	4 pcs	12/19/18		0.00	1.02	Conventional Mill - 1 - B4B		SBL 18/12/05
							Conventional Mill - 2 - B4B		
120	QC 2	4 pcs	12/19/18		0.00	0.00	QC 2 - 1		
							QC 2 - 12		
							QC 2 - 14		
							QC 2 - 16		
							QC 2 - 17		
							QC 2 - 19		
							QC 2 - 2		
							QC 2 - 20		
							QC 2 - 22		
							QC 2 - 23		
							QC 2 - 25		
							QC 2 - 32		
							QC 2 - 33		
							QC 2 - 35		
							QC 2 - 38		
							QC 2 - 39		
							QC 2 - 4		
							QC 2 - 40		
							QC 2 - 44		
							QC 2 - 45		
							QC 2 - 48		
							QC 2 - 49		
							QC 2 - 50		

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DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																																
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Description Work Order Dart Aerospace Ltd. 1270 Aberdeen Street Hewkesbury, ON K64 1K7 CANADA TEL: 1 813 632-8200 Email: sales@dartaero.com www.dartaerospace.com Date: 12/05/18 Container No: S134672 Part: D2662-2 Job No: 187090 Serial No/Batch: S134672 Revision: Inspector: Exp Date: Instructions: Various STC's				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval																																																																
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				QC 2 - 51	
				QC 2 - 52	
				QC 2 - 54	
				QC 2 - 56	
				QC 2 - 57	SBL 18/12/08
				QC 2 - 62	
				QC 2 - 63	
				QC 2 - 8	
130 QC 8	4 pcs	12/19/18	0.00 0.00	QC 8 - 12	
				QC 8 - 14	
				QC 8 - 16	DAS
				QC 8 - 17	1
				QC 8 - 20	9-89
				QC 8 - 25	
				QC 8 - 3	
				QC 8 - 32	
				QC 8 - 33	
				QC 8 - 35	
				QC 8 - 38	
				QC 8 - 39	
				QC 8 - 4	
				QC 8 - 44	
				QC 8 - 45	
				QC 8 - 49	
				QC 8 - 58	
				QC 8 - 8	
				QC 8 - 9	
				QC 8 - 68	
140 Handfinish - 1-1 Chemical-B4B	4 pcs	12/19/18	0.00 0.12	Handfinish - 1 - 1 - B4B	
				Handfinish - 1 - 2 - B4B	
				Handfinish - 1 - 3 - B4B	
				Handfinish - 1 - 4 - B4B	
				Handfinish - 1 - 5 - B4B	
				Handfinish - 1 - 6 - B4B	
				Handfinish - 1 - 7 - B4B	
				Handfinish - 1 - 8 - B4B	
				Handfinish - 1 - 9 - B4B	
				Handfinish - 1 - 10 - B4B	D.R 18/12/11
				Handfinish - 1 - 11 - B4B	
				Handfinish - 1 - 12 - B4B	
				Handfinish - 1 - 13 - B4B	
				Handfinish - 1 - 14 - B4B	
				Handfinish - 1 - 15 - B4B	
				Handfinish - 1 - 16 - B4B	
				Handfinish - 1 - 17 - B4B	
				Handfinish - 1 - 18 - B4B	
				Handfinish - 1 - 19 - B4B	
				Handfinish - 1 - 20 - B4B	
				Handfinish - 1 - 21 - B4B	

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DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Cross tube ☐ Water Jet ☐ Engineering ☐ Machining ☐ Small Fab ☐ Prod. Eng. Coord. ☐ Quality ☐ Thermoforming ☐ Finishing ☐ Rec/Store/Packaging ☐ Other ☐ Large Fab ☐ Composite ☐ Supplier ☐			
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Date :	Step #:	QTY Effective :	MRB (QSI042) Approval
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Description Work Order Deviation 	Disposition 	Completed By
		Lead hand / Supervisor Approval Verification
		QC / QA Coordinator Approval

Root Cause Environment ☐ No Re-verification ☐ Design ☐ Operator ☐ Doc/Data ☐ Offset/Setup ☐ Equip/Tooling ☐ Supplier ☐ Handling/Pre ☐ Training ☐ Material ☐ Use for Testing ☐ Internal Transport ☐ Poor Information ☐ Tribal Knowledge ☐ Rushing ☐ LOA ☐ Product Improvement ☐ Substation ☐ Process Improvement ☐ Past Expiry Date ☐ Manufacturing Process ☐ Misidentified ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Temperature/Cure ☐ Power Loss/Surge ☐ Positioned Wrong ☐ Bending ☐ Set-up ☐ Folio/Program ☐ Outside Dimensions ☐ Centre Not Concentric ☐ BOM/Route ☐ Grain ☐ Over/Under tolerance ☐ Cracks ☐ Broken/Damage/Defect ☐ Weld ☐ Part Incorrect ☐ Crimp/Kink/Ripple/Wave ☐ Inspection Incomplete/Unqualified ☐ Wrong Stock Pulled ☐ Part Lost/Missing ☐ Cuffs ☐ Contamination ☐ Out of Sequence ☐ Part Moved ☐ Crushing ☐ Countersink ☐ Off-set ☐ Drawing ☐ Heat Treat ☐ Cut Too Short ☐ Misabeled ☐ Finish ☐ Wave/Twist in Tube ☐ Instructions Incomplete/Unclear ☐ Fit/Function ☐ Misread ☐ Marks/Chatter ☐ Drill Holes ☐ Misaligned/off center ☐ Turning Sequence ☐	
OTHER : ☐			

				Handfinish - 1 - 22 - B4B	
150	Powdercoat - 1 White Gl(A)- B4B	4 pcs	12/19/18	0.00 0.12	Powdercoat - 1 - B4B
					Powdercoat - 2 - B4B
					Powdercoat - 3 - B4B
					Powdercoat - 4 - B4B
160	QC 3	4 pcs	12/19/18	0.00 0.00	QC 3 - 10
					QC 3 - 13
					QC 3 - 15
					QC 3 - 16
					QC 3 - 17
					QC 3 - 18
					QC 3 - 2
					QC 3 - 26
					QC 3 - 28
					QC 3 - 3
					QC 3 - 30
					QC 3 - 34
					QC 3 - 36
					QC 3 - 38
					QC 3 - 41
					QC 3 - 51
					QC 3 - 58
					QC 3 - 59
					QC 3 - 6
					QC 3 - 68
					QC 3 - 9
170	Packaging 3-1 - Stock - B4B	4 pcs	12/19/18	0.00 0.00	Packaging 3 - 1 - B4B
					Packaging 3 - 2 - B4B
					Packaging 3 - 3 - B4B
					Packaging 3 - 4 - B4B
					Packaging 3 - 5 - B4B
					Packaging 3 - 6 - B4B
					Packaging 3 - 7 - B4B
					Packaging 3 - 8 - B4B
					Packaging 3 - 9 - B4B
					Packaging 3 - 10 - B4B
					Packaging 3 - 11 - B4B
					Packaging 3 - 12 - B4B
					Packaging 3 - 13 - B4B
					Packaging 3 - 14 - B4B
					Packaging 3 - 15 - B4B
					Packaging 3 - 16 - B4B
					Packaging 3 - 17 - B4B
180	QC 21 - SA	4 pcs	12/19/18	0.00 0.00	QC 21 - SA - 16

Part Op **100** - (HAAS CNC Vertical Machine), Program part number and batch number. Inspect part number and batch number are Descriptions: programmed MACHINE AS PER FOLIO FB069 & DWG DWG REV: E FOLIO REV: E

110 - (Manufacture as per dwg), Machine Keyway and inspect per attached dimension sheet

120 - QC2- Inspect parts off machine FAI/FAIB

130 - QC8- Inspect parts - second check

140 - Chemical Conversion Coat per QSI005 4.1

150 - White Gloss(Ref: 4.3.5.1) per QSI005 4.3-Alum START TIME: 9:00 OVEN TEMPERATURE: 320°

FINISH TIME: 9:30 M 108951

160 - QC3- Inspect Part Finish

170 - Identify as per dwg & Stock Location:

180 - QC21- Final Inspection - Work Order Release

DQA: _____ Date: _____



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Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation			Disposition		
			Completed By		
			Lead hand / Supervisor Approval Verification		
			QC / QA Coordinator Approval		
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER :					

Job BOM				
Part / Item	Component Name	Quantity	Operation	Container
D6101-001	Saddle Billet	4 Ea (1 ea)	100-HAAS 4 Axis	1x 5038650 3x 5067879
Job Allocations				
Operation	Component Part	Required	Inventory	Allocated
100-HAAS 4 Axis	D6101-001	4	41	0
Part Specifications				
Specifications could not be found.				

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OTHER :					

DART AEROSPACE LTD				Work Order: 187 090	
Description: 206 Saddle, Inboard, Left side				Part Number: D2662-2	
Inspection Dwg: D2662 Rev: E DSK: Rev:				Page 1 of 1	

FIRST ARTICLE INSPECTION DIMENSION SHEET

Dim	Min	Max	Go/No Go Gauge	Record Actual Dimensions				
				1	2	3	4	5
A	3.611	3.621 ✓		3.616	3.616	3.616	3.616	
B	0.256	0.263 ✓		0.257	0.257	0.257	0.257	
C	0.315	0.322 ✓		0.316	0.316	0.316	0.316	
D	2.495	2.505 ✓		2.500	2.500	2.500	2.500	
E	1.674	1.684 ✓		1.679	1.679	1.679	1.679	
F	0.100	0.140		0.126	0.126	0.125	0.126	
G	0.210	0.230		0.222	0.225	0.224	0.224	
H	0.615	0.685 ✓		0.675	0.675	0.675	0.675	
I	2.470	2.510 ✓		2.495	2.500	2.503	2.500	
J	1.313	1.343		1.327	1.322	1.323	1.323	1.324
K	0.178	0.198 ✓		0.188	0.188	0.188	0.188	
L	0.470	0.530 ✓		0.500	0.500	0.500	0.500	
M	1.125	1.145 ✓		1.135	1.1383	1.138	1.138	
N	0.100	0.180 ✓		0.135	0.135	0.135	0.135	
O	0.100	0.140		0.120	0.135	0.130	0.134	
P	0.240	0.260		0.253	0.253	0.255	0.254	
Q	0.677	0.697 ✓		0.687	0.687	0.687	0.687	
R	0.540	0.560		0.549	0.5465	0.550	0.550	
S	0.912	0.932		0.920	0.9195	0.919	0.919	
T	0.787	0.807		0.795	0.796	0.7985	0.797	
U	5.990	6.010		5.996	5.997	6.000	6.000	
V	4.995	5.005 ✓		5.000	5.000	5.000	5.000	
W	0.490	0.510		0.499	0.499	0.501	0.502	
X	0.312	0.319 ✓		0.313	0.3125	0.3125	0.3125	
Y	0.990	1.010 ✓		1.000	1.000	1.000	1.000	
Z								
AA	1.245	1.255 ✓		1.250	1.250	1.250	1.250	
AB	0.490	0.510		0.501	0.500	0.500	0.500	
AC	3.745	3.755 ✓		3.750	3.750	3.750	3.750	
AD	0.100	0.140		0.133	0.137	0.137	0.130	
AE	0.235	0.240		0	0.238	0.238	0.237	
AF	0.510	0.515		0	0.50	0.510	0.510	
AG	0.100	0.120		0.110	0.110	0.110	0.110	
AH	1.565	1.585 ✓		1.575	1.578	1.578	1.578	

DAS Accept/Reject

Measured by: 57 9-89	Date: 18/12/05
Audited by: [Signature] 9-89	Date: 18/12/11
Prototype Approval:	Date:

Rev	Date	Change	Revised by	Approved
D	02.12.12	R-format; Added Dim. U-W & DT8683, DT8686 & DT8695 A/B	KJ/RF	
E	06.07.05	Revised per drawing revision C	KJ/JLM	
F	07.03.21	Revised per drawing revision D	KJ/JLM	
G	12.01.10	Revised per drawing revision E	KJ	
H	12.03.08	Dimension AH added, O revised	KJ	[Signature]

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: <u>187090</u> Part No. <u>D2662-2</u> NCR No. _____		DISPOSITION Rework ☒ Scrap ☐ Use-as-is ☒ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%;"> <tr> <td>Skid-tube ☐</td> <td>Cross tube ☐</td> <td>Water Jet ☐</td> <td>Engineering ☐</td> </tr> <tr> <td>Machining ☒</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☒	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																																																																																																	
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Description Work Order Deviation the measurement 0.220 (G) at the radius of the flange next to the bore is under tolerance by 0.005 to 0.006 0.205 and 0.204. ONE PART ONLY				Disposition USE AS IS. PART IS ACCEPTABLE. BLEND OUT AFFECTED AREA.				Completed By <u>[Signature]</u> 2018.12.07 Lead hand / Supervisor Approval Verification <u>[Signature]</u> 18/12/08 QC / QA Coordinator Approval																																																																																																																															
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